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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/554,954	07/24/2000	MATS LEJON	9847-0056-6X	8003
22850	7590	06/07/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			MULLINS, BURTON S	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicant Number

09/554,954

Applicant(s)

LEIJON, MATS

Examiner

Burton S. Mullins

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 46-95 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 46-95 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Suspension

1. Pursuant to the Board of Appeal's final decision regarding U.S. Application No. 08/973,019, suspension has been lifted. As set forth in the decision on petition requesting suspension, the instant application was granted a suspension pending the decision on appeal of the '019 application. On November 27, 2002, the Board affirmed the rejection of the '019 application and on August 27, 2003, the Board denied applicant's request for reconsideration, thus terminating prosecution of the '019 application. An action on the merits follows.

Claim Objections

2. The numbering of claims has been changed to reflect applicant's remarks filed 24 July 2002.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 46-70 and 75-95 are rejected under 35 U.S.C. 103(a) as being unpatentable over unpatentable over Kuznetsov (US 5,483,111) in view of Elton et al. (US 5,036,165).

Kuznetsov substantially teaches the claimed invention except that it does not show that the surrounding electrical insulation have a semiconducting inner layer, a semiconducting outer layer, and an intermediate layer of electrically insulating material positioned between the semiconducting inner layer and the semiconducting outer layer. Kuznetsov does not disclose

that the semiconducting inner layer is electrically connected to the conductor so as to be at a same electric potential as the conductor.

Kuznetsov does not disclose that the semiconducting outer layer is connected along a length thereof to a node held at a controlled electric potential. Kuznetsov does not disclose that the semiconducting outer layer being connected at spaced apart regions to the node. Kuznetsov does not disclose that the controlled electric potential being earth potential. Kuznetsov does not disclose that at least one pair of adjacent layers of the inner layer, the intermediate layer, and the outer layer being secured to each other along substantially respective contact surfaces. Kuznetsov does not disclose that when the semiconducting outer layer being connected to earth potential, an electric field of the high voltage rotating electric machine at both the slots and the end winding region being near zero. Kuznetsov does not disclose that the inner semiconducting layer having a first plastics material having first electrically conductive particles dispersed therein', the equipotential outer layer having a second plastics material having second electrically conductive particles dispersed therein, and the intermediate layer of electrical insulation having a third plastics material.

Elton et al. disclose that the surrounding electrical insulation have a semiconducting inner layer (104), a semiconducting outer layer (110), and an intermediate layer of electrically insulating material (106) positioned between the semiconducting inner layer (104) and the semiconducting outer layer (110). Elton et al. disclose that the semiconducting inner layer (104) being electrically connected to the conductor (102) so as to be at a same electric potential as the conductor (102). Elton et al. disclose that the semiconducting outer layer (110) being

connected along a length thereof to a node (112) held at a controlled electric potential. Elton et al. disclose that the semiconducting outer layer (110) being connected at spaced apart regions to the node (112). Elton et al. disclose that the controlled electric potential being earth potential.

Elton et al. disclose that at least one pair of adjacent layers of the inner layer (104), the intermediate layer (106), and the outer layer (110) being secured to each other along substantially respective contact surfaces. Elton et al. disclose that when the semiconducting outer layer (110) being connected to earth potential, an electric field of the high voltage rotating electric machine at both the slots and the end winding region being near zero. Elton et al. disclose that the inner semiconducting layer (104) having a first plastics material having first electrically conductive particles dispersed therein; the equipotential outer layer (110) having a second plastics material having second electrically conductive particles dispersed therein, and the intermediate layer (106) of electrical insulation having a third plastics material. The invention of Elton et al. has the purpose of avoiding the formation of a corona discharge when an electrical potential exists between the conductor and the region adjacent the exterior surface of the insulator.

It would have been obvious at the time the invention was made to modify the high voltage electrical machine of Kuznetsov and provide it with the insulation configuration disclosed by Elton et al. for the purpose of avoiding the formation of a corona discharge when an electrical potential exists between the conductor and the region adjacent the exterior surface of the insulator. It would have been obvious to one having ordinary skill in the art at the time the invention was made to specify the strength and coefficient of thermal expansion of the

insulation layers since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Referring to claim 83, no patentable weight has been given to the method of manufacturing limitations (i.e. joint/applied together by multi-layer extrusion die) since even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). It would have been obvious to one having ordinary skill in the art at the time the invention was made to select each of the first plastics material, the second plastics material and the third plastics material from at least one of an ethylene butyl acrylate copolymer rubber, an ethylene-propylene-diene monomer rubber (EPDM), an ethylene-propylene copolymer rubber (EPR), LDPE, HDPE, PP, PB, PMP, XLPE, EPR, and a silicone rubber since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

2. Claims 71-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuznetsov in view of Elton et al. as applied to claims 50-51 above, and further in view of Redfern (UK 468,827). Kuznetsov and Elton et al. substantially teaches the claimed invention except that it does not show that each of the at least one slot having a plurality of substantially

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circular cylindrical openings extending axially and radially outside one another, at least one pair of adjacent openings being joined by a narrower waist portion. Neither Kuznetsov nor Elton et al. disclose that a radii of the plurality of substantially circular cylindrical openings decrease in a direction away from a yoke portion of a laminated core of the stator.

Redfern discloses that each of the at least one slot having a plurality of substantially circular cylindrical openings extending axially and radially outside one another, at least one pair of adjacent openings being joined by a narrower waist portion. Redfern discloses that a radii of the plurality of substantially circular cylindrical openings decrease in a direction away from a yoke portion of a laminated core of the stator. Redfern's invention has the purpose of giving the machine a suitable leakage value.

It would have been obvious at the time the invention was made to modify the high voltage of Kuznetsov and Elton et al. and provide it with slot configuration disclosed by Redfern for the purpose of giving the machine a suitable leakage value.

Response to Arguments

5. Applicant's arguments filed 24 July 2002 have been fully considered but they are not persuasive. Applicant argues that Elton does not disclose a rotating electric machine having a winding with two semiconducting layers. The examiner points out that Elton clearly intends the insulated conductors for use as windings in a dynamoelectric machine (abstract; c.4, line 50-c.6, line 4; c.8, lines 45-60; Figs.1-6). In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed

invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Elton's cable winding minimizes the possibilities of corona discharge.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Burton S. Mullins whose telephone number is 571-272-2029. The examiner can normally be reached on Monday-Friday, 9 am to 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 571-272-2034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Burton S. Mullins
Primary Examiner
Art Unit 2834

bsm
02 June 2004